Introduction

Information technology is transforming the economy and society, creating a completely new paradigm. Businesses are using telecommunications to speed up transactions, reduce costs, and expand their markets. Consumers are buying books, CDs, food, and clothing online. Families are exchanging photos via e-mail. Students at all levels are taking courses via distance learning technologies. And telemedicine is making mental health and other specialist services available in remote, underserved areas of the state.

In response to these changing conditions, communities are finding that economic and community development processes need to be retooled. Communities are finding that they need to become Information Age communities.

What is an Information Age community? Quite simply, Information Age communities utilize information technology to improve economic opportunities and quality of life.

Information Age communities have several characteristics:

Community Leadership and Support. The importance of community leadership cannot be understated. The most successful IT efforts in communities--both in Nebraska and across the U.S.--have been locally driven. In fact, whether or not a community has a core group of committed, well-connected individuals is the single most important predictor of its success. This core group often consists of representatives of key sectors and institutions in a community, including local government, economic and community development organizations, business, the library, education, and health care. IT professionals and industry representatives are also good resources. Effective community leaders build connections within the community, the state, and even throughout the country. Information Age development doesn't require community leaders who know all of the answers. It does, however, require community leaders who have the passion and commitment to find the answers.

Economic Development and E-Commerce. Information technology offers many opportunities for economic development. E-commerce make it possible for businesses to market their products and services worldwide. Information technology can also improve efficiency and reduce costs. Economic development efforts should include support and training for entrepreneurs and e-commerce training for existing businesses. Communities with a sound telecommunications infrastructure and a tech-savvy workforce may also be able to attract IT businesses. Ainsworth, Wausa and Bloomfield are examples of Nebraska communities in which call centers have located.

Telecommunications Infrastructure. Within the past couple of years, we have seen advances in the use of satellite, wireless, DSL, and cable technologies to provide broadband services. DSL and cable modems typically provide 1-2 megabits per second. Some experts predict that in 4 to 5 years, broadband with speeds of 25 to 40 megabits per second will be needed. Others predict that by 2010, one gigabit broadband (one billion bits) will be needed. The convergence of voice, video, and data will drive the demand for broadband.

Voice over IP (VoIP), the transmission of voice communications over the Internet, is an example of convergence and may be the killer application for broadband. Among the advantages of VoIP is the ability to choose a phone number from nearly any area code and to use that number anywhere. VoIP can also offer cost savings because VoIP services are not subject to many state and federal taxes.

WIFI is another emerging technology being used in communities, including Spokane, Washington; South Sioux City, Nebraska; and Carroll, Iowa. WIFI hot spots allow

business people to check their e-mail when they are out of the office. WIFI can also facilitate efficient city operations, allowing police officers, public works workers and other city employees to quickly access information. Some cell phones will now make VoIP calls when in a WIFI hot spot.

There are a number of strategies communities can employ to stimulate the deployment of advanced services and next -generation broadband. Aggregating local and/or regional demand has been used successfully in a number of communities, regions, and states across the United States. By aggregating public and private demand for telecommunications services, communities can prove to a provider that there is sufficient demand in a community to warrant infrastructure investments.

Another strategy that has been successfully employed is stimulating demand through education and training. Because most Nebraska businesses are in the early stages of adopting e-business practices, targeting training at local businesses may effectively stimulate the demand for broadband services.

Developing public-private partnerships is a third strategy. A public-private partnership may be as simple as hosting an open house for a wireless broadband Internet provider. Other communities have undertaken more bold efforts. Blacksburg, Virginia is perhaps the best example of a community that has undertaken bold public-private partnerships. Blacksburg, the most wired community in the United States, has made investments in duct, fiber, and collocation facilities which are leased to telecommunications providers.

Technology Literacy and Access. In order to prosper in the Information Age, communities need a technologically literate workforce. Low-cost or free training on the use of basic computer applications including using the Internet should be available in the community. Communities should also have computers with Internet access available for public use.

Advanced Technology Training. Information technology businesses need highly trained IT professionals. Communities in which advanced technology training is available are better able to address the shortage of IT workers faced by many businesses and also the continuing education needs of IT professionals.

Community Services and Information. Information technology can be used to more efficiently and cost-effectively distribute information, leading to greater civic involvement. Some services can also be provided via information technology. Many schools in Nebraska offer distance learning classes via interactive video. Patients in remote locations can also receive medical consultations from specialists via telemedicine. Areas in this section include public library services; education; health care; local government and community services; criminal justice, law enforcement, and emergency services; and non-profits, arts, culture, and history.

Social Capital. Social capital refers to the social networks that people can draw upon to solve common problems. Information technology can be used to inform and involve citizens, building social capital. Communities in which institutions and citizens work well together are more successful in their development efforts.

Quality of Life. Communities with a high quality of life are more successful in attracting and retaining IT workers and businesses. Nebraska communities have many things to offer: friendly, hard-working people; good schools; clean air; low crime rates; and little traffic congestion. However, there are other quality of life issues which may need to be addressed by a community in order to more effectively attract and retain IT professionals and businesses.

How to Use This Workbook

Suggested Planning Process: A Guide for the Chair or Facilitator

This section suggests a process which can be used to assess a community's e-readiness and to develop a community plan to use information technology to enhance development opportunities.

Benchmark Data

The data included in this section is provided to help communities understand how they compare to statewide and national benchmarks in several areas regarding the use of information technology.

5 Technology Trends for Communities

Is your community prepared for these five technology trends? E-commerce, e-government, and telehealth are changing the way businesses, governments, and health care providers operate. Voice over IP and WIFI hot spots are emerging technologies that are helping businesses and local governments operate more efficiently.

Is Your Community an Information Age Community?

This nine-question quiz is useful for beginning community discussions regarding information technology development. The quiz includes suggested strategies and activities for communities.

Community E-Readiness Assessment

This assessment tool is designed to help communities address their e-readiness in six e-readiness areas:

- Community Leadership and Support
- Telecommunications Infrastructure
- Technology Literacy and Access
- Advanced Technology Training
- Economic Development and E-Commerce
- Community Services and Information

In addition to the six e-readiness areas, the workbook also includes information on the importance of quality of life and social capital. The *Community E-Readiness Assessment* parallels the *Is Your Community an Information Age Community?* quiz, providing a tool for communities to examine each of these areas in more depth. The assessment takes an asset-based approach, asking communities to identify community strengths and available resources in each e-readiness area.

Worksheets

Worksheets for each stage in the planning process help keep community or regional technology committees on track and simplify the planning process. The E-Readiness Assessment Summary Worksheet allows committee members to review assessment information quickly. The Supplemental Assessment Activities Planning Worksheet helps committee members plan supplemental assessment activities such as conducting a community survey or an engineering study. The Building Community Support Planning Worksheet helps committee members develop a plan for building community support. The Technology Plan Planning Worksheet simplifies the process of compiling and synthesizing assessment information into a plan. Committees can use the Implementation Planning Worksheet to guide implementation of the community's technology plan.

Sample Plans

Two sample plans are provided. The first is a plan for a fictitious community. This plan addresses the most common areas of focus: community leadership; telecommunications

infrastructure; technology literacy and access; and economic development and e-commerce. The second plan was developed by the KBR TechKnowledge Coalition, a group of community leaders from Keya Paha, Brown, and Rock Counties. The plan addresses technology development in three areas: telecommunications infrastructure; technology literacy and access; and economic development and e-commerce. Links to additional community technology plans are listed under Additional Resources.

Additional Resources

Supplementary workbook resources, links to additional community technology plans, and other resource materials are listed in this section.